

Information Disclosure
Statement By Applicant

(Use Several Sheets if Necessary)

Title: Direct Differentiation of Human Pluripotent Stem Cells and Characterization of Differentiated Cells

Inventors: Carpenter, M., et al.

Filing Date: March 1, 2002

Group: ¹⁶³² T8D

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U.S. Patent Documents

Examiner Initial	Ref.	Patent No.	Filing Date	Issue Date	Class/ Subclass	Inventors:	Title:
TNT	A	5,766,948	Nov 3/93	Jun 16/98	435/368	Gage, F.H., et al.	Method for Production of Neuroblasts
	B	5,773,255	Jun 5/95	Jun 30/98	435/70.3	Laurance, M.E., et al.	Glucose Responsive Insulin Secreting β -Cell Lines and Method For Producing Same
	C	5,789,246	Nov 18/96	Aug 4/98	435/325	Reid, L.M., et al.	Compositions Comprising Hepatocyte Precursors
	D	5,849,553	Jun 7/95	Dec 15/98	435/172.3	Anderson, D.J., et al.	Mammalian Multipotent Neural Stem Cells
	E	5,851,832	Jun 7/95	Dec 22/98	435/368	Weiss, S., et al.	In Vitro Growth and Proliferation of Multipotent neural Stem Cells and Their Progeny
	F	5,928,947	Jun 7/95	Jul 27/99	435/455	Anderson, D.J., et al.	Mammalian Multipotent Neural Stem Cells
	G	5,968,829	Sep 5/97	Oct 19/99	435/467	Carpenter, M.	Human CNS Neural Stem Cells
	H	5,981,165	Jun 7/95	Nov 9/99	435/4	Weiss S., et al.	In Vitro Induction of Dopaminergic Cells
	I	6,040,180	May 7/97	Mar 21/00	435/377	Johe, K.	In vitro Generation of Differentiated Neurons From Cultures of mammalian Multipotent CNS Stem Cells
	J	6,090,622	Mar 31/97	Jul 18/00	435/366	Gearheart, J.D., et al.	Human Embryonic Pluripotent Germ Cells
TNT	K	6,200,806	Jun 26/98	Mar 13/01	435/366	Thomson, J.A.	Primate Embryonic Stem Cells

Foreign Patent or Published Foreign Patent Application

Examiner Initial	Ref.	Document No.	Publ. Date	Jurisdiction	Title:	Translation
TNT	L	WO 99/04775	Feb 4/99	PCT	Method of Treating Dopaminergic and Gaba-Nergic Disorders	N/A
	M	WO 99/20741	Apr 29/99	PCT	Methods and Materials for the Growth of Primate-Derived Primordial Stem Cells	N/A
	N	WO 99/43785	Sep 2/99	PCT	Derivation of Cells and Tissues from Embryonic Pre-Stem Cells for Transplantation Therapies	N/A
	O	WO 99/53021	Oct 21/99	PCT	Cell Differentiation/Proliferation and Maintenance and Uses Thereof	N/A
	P	WO 00/17323	Mar 30/00	PCT	Stable Neural Stem Cell Lines	N/A
	Q	WO 98/50526	Nov 12/98	PCT	Generation, Characterization, and Isolation of Neuroepithelial Stem Cells and Lineage Restricted Intermediate Precursor	N/A
	R	WO 99/01159	Jan 14/99	PCT	Lineage-Restricted Neuronal Precursors	N/A
TNT	S	WO 99/28443	Jun 10/99	PCT	Lineage Restricted Glial Precursors from the Central Nervous System	N/A

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Form 1449 (modified)

Docket: 090/003C

U.S.S.N. 10/087,473

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Other Documents

Examiner Initial	Ref.	Author, Title, Date, Source
TNT	T	Andrews, et al., Retinoic Acid Induces Neuronal Differentiation of a Cloned Human Embryonal Carcinoma Cell Line in Vitro, Dev. Biol. 103:285 (1984)
	U	Bain, et al., Embryonic Stem Cells Express Neuronal Properties In Vitro, Dev. Biol. 168:342 (1995)
	V	Bain, et al., Expression of Retinoid X Receptors in P19 Embryonal Carcinoma Cells and Embryonic Stem Cells, Biochem. Biophys. Res. Commun. 200:1252 (1994)
	W	Bain, et al., Retinoic Acid Promotes Neural and Represses Mesodermal Gene Expression in Mouse Embryonic Stem Cells in Culture, Chem. and Biophys. Res. Comm. 223:691 (1996)
	X	Bieseckert, et al., Interleukin-6 is a Component of Human Umbilical Cord Serum and Stimulates Hematopoiesis in Embryonic Stem Cells in Vitro, Exp. Hematol. 21:744 (1993)
	Y	Bouwmeester, et al., Vertebrate Head Induction By Anterior Primitive Endoderm, BioEssays 19:855 (1997)
	Z	Brustle, et al., In Vitro-Generated Neural Precursors Participate in Mammalian Brain Development, Proc. Natl. Acad. Sci. USA 94:14809 (1997)
	AA	Brustle, et al., Embryonic Stem Cell-Derived Glial Precursors: A Source of Myelinating Transplants, Science 285:754 (1999)
	AB	Burkert, et al., Early Fetal hematopoietic Development From In Vitro Differentiated Embryonic Stem Cells, New Biol. 3:698 (1991)
	AC	Davidson, et al., Cell Fate and Lineage Specification in the Gastrulating Mouse Embryo, Children's Medical Res. Institute 491 (1999)
	AD	Deacon, et al., Blastula-Stage Stem Cells Can Differentiate into Dopaminergic and Serotonergic Neurons after Transplantation, Exp. Neurol. 149:28 (1998)
	AE	Dinsmore, et al., Embryonic Stem Cells Differentiated In Vitro as a Novel Source of Cells for Transplantation, Cell Transplant 5:131 (1996)
	AF	Fisher, et al., Factors Influencing the Differentiation of Embryonal Carcinoma and Embryo-Derived Stem Cells, Exp. Cell Research 182:403 (1989)
	AG	Fraichard, et al., In Vitro Differentiation of Embryonic Stem Cells into Glial Cells and Functional Neurons, J. Cell Science 108:3181 (1995)
	AH	Gendron, et al., Induction of Embryonic Vasculogenesis by bFGF and LIF In Vitro and In Vivo, Dev. Biol. 177:332 (1996)
	AI	Itskovitz-Eldor, et al., Differentiation of Human Embryonic Stem Cells into Embryoid Bodies Comprising the Three Embryonic Germ Layers, Mol. Med. 6:88 (2000)
	AJ	Kalyani, et al., Cell Lineage in the Developing Neural Tube, Biochem. Cell. Biol. 76:1051 (1998)
	AK	Keller, In Vitro Differentiation of Embryonic Stem Cells, Cell Biology 7:862 (1995)
	AL	Levinson-Dushnik, et al., Involvement of Hepatocyte Nuclear Factor 3 in Endoderm Differentiation of Embryonic Stem Cells, Mol. Cell. Biol. 17:3817 (1997)
	AM	Mujtaba, et al., Lineage-Restricted Neural Precursors Can Be Isolated from Both the Mouse neural Tube and Cultured ES Cells, Dev. Biol. 214:113 (1999)
	AN	Mummery, et al., Characteristics of Embryonic Stem Cell Differentiation: A Comparison With Two Embryonal Carcinoma Cell Lines, Cell Diff. Dev. 30:195 (1990)
	AO	Odorico, et al., Multilineage Differentiation from Human Embryonic Stem Cell Lines, Stem Cells 19:193 (2001)
TNT	AP	Okabe, et al., Development of Neuronal Precursor Cells and Functional Postmitotic Neurons from Embryonic Stem Cells In Vitro, Mech. Dev. 59:89 (1996)

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	AR	Pedersen, Studies of In Vitro Differentiation with Embryonic Stem Cells, Reprod. Fertil. Dev. 6:542 (1994)
	AS	Rao, Multipotent and Restricted Precursors in the Central Nervous System, New Anat. 257:1 (1999)
	AT	Rathjen, et al., Formation of a Primitive Ectoderm Like Cell Population, EPL Cells, From ES Cells in Response to Biologically Derived Factors, J. Cell. Sci. 112:601 (1999)
	AU	Rathjen, et al., Properties and Uses of Embryonic Stem Cells: Prospects for Application to Human Biology and Gene Therapy, Reprod. Fertil. Dev. 10:31 (1998)
	AV	Reubinof, et al., Embryonic Stem Cell Lines From Human Blastocysts: Somatic Differentiation In Vitro, Nature Biol. 18:399 (2000)
	AW	Robertson, Derivation and Maintenance of Embryonic Stem Cell Cultures, Meth. Mol. Biol. 75:173 (1997)
	AX	Schuldiner, et al., Effects of Eight Growth Factors on the Differentiation of Cells Derived from Human Embryonic Stem Cells, PNAS 97:11307 (2000)
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	AZ	Seaberg, et al., Neural Determination Genes Revealed By Expression Trapping in Embryonic Stem Cells, Soc. Neurosci. (29 th Annual Meeting) 25:527 (1999)
	BA	Shamblott, et al., Derivation of Pluripotent Stem Cells from Cultured human Primordial Germ Cells, Proc. Natl. Acad. Sci. USA 95:13726 (1998)
	BB	Smith et al., Culture and Differentiation of Embryonic Stem Cells, J. Tiss. Cult. Meth. 13:89 (1991)
	BC	Thomson, et al., Embryonic Stem Cell Lines Derived from Human Blastocysts, Science 282:1145 (1998)
	BD	Trojanowski, et al., Transfectable and Transplantable Postmitotic Human Neurons: A Potential "Platform" for Gene Therapy of nervous System Diseases, Exp. Neurol. 144:92 (1997)
	BE	Tropepe, et al., Abstract 205.18: Autonomous Neural Cell Fate Specification in Mouse Embryonic Stem Cells, Soc. Neurosci. 25:527 (1999)
	BF	Tropepe, et al., Abstract 205.17: Neural Determination Genes Revealed by Expression Trapping in Embryonic Stem Cells, Soc. Neurosci. 25: 527 (1999)
	BG	Van Inzen, et al., Neuronal Differentiation of Embryonic Stem Cells, Biochim. Biophys. Acta 1312:21 (1996)
	BH	Varlet, et al., Nodal Expression in the Primitive Endoderm is Required for Specification of the Anterior Axis During Mouse Gastrulation, Development 124:1033 (1997)
	BI	Wojcik, et al., Catecholaminergic Neurons Result from Intracerebral Implantation of Embryonal Carcinoma Cells, Proc. Natl. Acad. Sci. USA 90:1305-130
	BJ	Yandava, et al., "Global" Cell Replacement is Feasible Via Neural Stem Cell Transplantation: Evidence from the Dysmyelinated Shiverer Mouse Brain, Proc. Natl. Acad. Sci. USA 96:7029 (1999)
	BK	Yao, et al., Neuronal Differentiation of P19 Embryonal Carcinoma cells in Defined Media, J. Neuroscience Res. 41:792 (1995)
	BL	Lamb, T.M., et al., Neural Induction by the Secreted Polypeptide Noggin, Science 262:713 (1993)
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TNT	BO	Kalyani, A., et al., Cell Lineage in the Developing Neural Tube, Biochem. Cell Biol. 76:1051 (1998)
TNT	BP	Li, M., et al., Generation of Purified Neural precursors from Embryonic Stem Cells by Lineage Selection, Current Biol., Current Science 8:971 (1998)
TNT	BQ	Mujtaba, T., et al., Lineage-Restricted Neural Precursors Can Be Isolated from Both the Mouse Neural Tube and Cultured ES Cells, Dev. Biol. 214:113 (1999)

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